

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

WILMER AND PAULINE CONN )  
 )  
 ) COMPLAINANTS )  
 )  
 ) V. ) CASE NO. 2010-00049  
 )  
 ) FLEMING COUNTY WATER ASSOCIATION )  
 )  
 ) DEFENDANT )

ORDER

Wilmer and Pauline Conn have filed a formal complaint against Fleming County Water Association ("FCWA")<sup>1</sup> in which they request that FCWA be directed to provide water service through an abandoned water main that is located near the Maxey Flats Disposal Site ("MFDS"). Finding the requested extension of service is not reasonable, we deny the Complaint but direct the water utility to provide water service in accordance with 807 KAR 5:066, Section 11.

BACKGROUND

In January 1963, Nuclear Engineering Company, Inc., ("NECO") obtained a license from the Commonwealth of Kentucky ("Commonwealth") to bury low-level radioactive waste at the MFDS in southeastern Fleming County, Kentucky. It began accepting such waste in May 1963. During the next 14 years, hundreds of private and

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<sup>1</sup> FCWA, a non-profit corporation organized pursuant to KRS Chapter 273, owns and operates facilities that distribute water to approximately 3,982 customers in Fleming, Lewis, and Mason counties, Kentucky. *Annual Report of Fleming County Water Association to the Kentucky Public Service Commission for the Year Ended December 31, 2010* at 5, 27. It is a utility subject to Commission jurisdiction. KRS 278.012.

public entities deposited radioactive waste at the site. Most waste was buried up to 32 feet deep in 46 unlined trenches covering 26 acres. Small-volume wastes with high specific activity were buried in "hot wells," which are constructed of concrete, coated steel pipe or tile, and capped with a large slab of concrete.<sup>2</sup>

In 1972, the Kentucky Department of Health discovered that radioactive contaminants were escaping from the disposal trenches. In 1974, the Commonwealth completed a special study that confirmed tritium and other radioactive contaminants were migrating from the trenches. After leachate was discovered migrating through the subsurface geology, the Commonwealth ordered NECO to cease accepting waste at the site in December 1977.<sup>3</sup>

Preliminary mitigation efforts began in 1973, when an evaporator was installed at the site to manage the large volume of water that flowed to the disposal trenches. This evaporator operated until 1986. As another method of minimizing the infiltration of water to the trenches, a polyvinylchloride cover was placed over the trenches in 1981.<sup>4</sup>

In 1983, the Commonwealth petitioned the U.S. Environmental Protection Agency ("EPA") to determine whether the site would be eligible for remediation under the Comprehensive Environmental Response, Compensation, and Liability Act

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<sup>2</sup> U.S. Environmental Protection Agency, *Superfund Record of Decision: Maxey Flats Nuclear Disposal*, KY 12 (Sept. 30, 1991) (filed in the case record as PSC Staff Hearing Exhibit 4) (hereinafter "ROD"); U.S. Environmental Protection Agency Region 4, *Five-Year Review Report for the Maxey Flats Disposal Site 9* (Sept. 28, 2007) available at <http://www.epa.gov/superfund/sites/fiveyear/f2007040001749.pdf> (hereinafter "Five-Year Review").

<sup>3</sup> ROD, *supra* note 2, at 13.

<sup>4</sup> *Id.*; *Five-Year Review*, *supra* note 2, at 3, 10.

("CERCLA"). In 1984, the EPA proposed the MFDS for inclusion on the National Priorities List under CERCLA.<sup>5</sup> The EPA finalized this listing in 1986.<sup>6</sup>

While state and federal regulators considered how to address the MFDS, local concerns about the release of potential contaminants from the site grew. Concerned Citizens for Maxey Flats, a local advocacy group, requested that FCWA provide water service to residents near the MFDS.<sup>7</sup> It argued that public water "would provide safe water service in the drainage area of the Maxey Flats area."<sup>8</sup>

On December 27, 1984, FCWA applied for a Certificate of Public Convenience and Necessity to construct approximately 19 miles of water mains to serve 95 customers in the Maxey Flats area.<sup>9</sup> This extension included the installation of water mains along Upper Rock Lick Road, Skaggs Lane, Ringo Mills Road, and Maxey Flats Road. FCWA estimated the total cost of this extension at \$800,000 and proposed to finance the project with grants of \$295,000 from the Appalachian Regional Commission ("ARC") and of \$345,000 from the Farmers Home Administration ("FmHA"), and a 40-year loan of \$146,000 from FmHA. On July 8, 1985, the Commission issued a Certificate of Public Convenience and Necessity to FCWA for the proposed project.

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<sup>5</sup> Amendment to National Oil and Hazardous Substances Contingency Plan: National Priorities List, 49 Fed. Reg. 40,320 (Oct. 15, 1984).

<sup>6</sup> Amendment to National Oil and Hazardous Substances Contingency Plan: National Priorities List, 50 Fed. Reg. 21,054 (Jun. 10, 1986).

<sup>7</sup> ROD, *supra* note 2, at 16.

<sup>8</sup> Watkins and Associates, Inc., Preliminary Engineering Report for the Maxey Flats Expansion Program of Fleming County Water Association, at 1-1 (May 7, 1984) (on file with the Commission in Case No. 9250, *Fleming County Water Association*).

<sup>9</sup> Case No. 9250, *Fleming County Water Association*, at 1 (Ky. PSC July 8, 1985).

Although FCWA budgeted \$800,000 for the project, the project only cost \$462,719.<sup>10</sup> As a result, the ARC reduced its grant commitment by \$82,330. Nevertheless, \$250,000 in funds remained from the Maxey Flats Extension. Accordingly, FCWA expanded the scope of its construction by adding two projects in 1986. The first project, which cost \$33,650, added approximately 19 customers and 2.6 miles of water mains on Gunshoot and Huzzy Roads.<sup>11</sup> The second project, which cost \$124,964, added 19 customers along Evans, Parker, Parkersburg, and New Hope Roads.<sup>12</sup> In 1987, FCWA constructed a 187,000-gallon water storage tank at a cost of \$129,000. The total construction cost for all projects was \$750,332.

While FCWA was constructing lines in the MFDS vicinity, the EPA continued to study the site. In 1986, it notified 832 parties<sup>13</sup> of their potential liability for site cleanup and offered them the opportunity to conduct and fund a Remedial Investigation/Feasibility Study of the MDFS. Eighty-two parties joined to form the Maxey Flats Steering Committee, which conducted and partially funded the technical work for a Remedial Investigation/Feasibility Study. In July 1989, the EPA approved the MFDS Remedial Investigation Report. The EPA released the Feasibility Study to the public in May 1991.<sup>14</sup>

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<sup>10</sup> See Letter from J.E. Smith, Jr., President of FCWA, to Public Service Commission (June 27, 1986) (on file in Case No. 9630, *Fleming County Water Association* (filed June 30, 1986)).

<sup>11</sup> *Id.*

<sup>12</sup> Letter from Carl B. Harmon, Principal Engineer, Watkins and Associates, Inc., to Public Service Commission (Sept. 3, 1986) (on file in Case No. 9687, *Fleming County Water Association* (filed Sept. 4, 1986)).

<sup>13</sup> These parties included many private companies in the nuclear industry as well as numerous hospitals, research institutions and laboratories, several federal agencies, and the Commonwealth of Kentucky. ROD, *supra* note 2, at 14.

<sup>14</sup> *Id.* at 15.

In September 1991, the EPA entered its Record of Decision (“ROD”) for MFDS. In the ROD, the EPA outlined several remedial action options and described the selected remedy to which the Commonwealth had consented. Under the selected remedy, MFDS was to undergo natural stabilization, which enables the buried materials to subside prior to the installation of a final engineered cap. The initial remedial activity would focus on eliminating potential liquid infiltration into and migration out of the trenches. Initially, leachate would be extracted and solidified. The surface of the site would be recontoured to improve surface water drainage and a cap consisting of nearly two feet of compacted clay soil and a synthetic liner would be placed over the site.<sup>15</sup> Additionally, the Commonwealth was to acquire land surrounding MFDS to ensure control of activities on the hill slopes and to prevent erosion or deforestation that could affect the integrity of the remedy.<sup>16</sup> This buffer zone would also enable authorities to monitor and test streams and other ground water for contamination.

To fund the remedial actions, potentially responsible parties comprised of federal, state, and private entities entered into two agreements in 1995. In the *de maximus* agreement, 43 entities agreed to pay for the removal of water in the burial trenches and to install the interim cap over the site. These projects were estimated to cost \$45 million.<sup>17</sup> A second, larger group of parties agreed to pay an estimated \$8.5 million in the *de minimus* agreement to assist in the cleanup actions and for past response

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<sup>15</sup> *Id.* at 123-25.

<sup>16</sup> *Id.* at 130.

<sup>17</sup> Press Release, Department of Justice, U.S. Announces Superfund Settlement (July 8, 1995), available at [http://www.justice.gov/opa/pr/Pre\\_96/July95/373.txt.html](http://www.justice.gov/opa/pr/Pre_96/July95/373.txt.html).

costs.<sup>18</sup> The Commonwealth purchased land to form the buffer zone from the *de minimus* agreement funds.

The buffer zone that the Commonwealth acquired consisted of 464 acres.<sup>19</sup> It included tracts along Upper Rock Lick Road and Drip Springs Hollow Road on which several individuals resided. Although these properties were conveyed to the Commonwealth in 1995, several of the Deeds of Conveyance allowed the previous owner to possess and reside on the property for twelve to twenty-four months. Two deeds expressly stated that the transfer was subject to all easements of record; the other Deeds were silent on the issue of easements.<sup>20</sup>

One of the easements along Upper Rock Lick Road is a utility easement granted to FCWA to provide water service. Prior to the Commonwealth's acquisition of the buffer zone, FCWA served nine customers within and downstream of the buffer zone. The Commonwealth's acquisition resulted in FCWA's loss of these customers. In response to this loss, FCWA contacted the Kentucky Natural Resources and Environmental Protection Cabinet and "expressed concern regarding . . . [the Commonwealth's] acquisition of property surrounding Maxey Flat and . . . [its] ability to

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<sup>18</sup> *Id.* At the hearing, Scott Wilburn testified that the total amount of the *de minimus* settlement was flexible to ensure that all costs would be covered. VR 02/03/2011; 13:37:00-13:37:33.

<sup>19</sup> ROD, *supra* note 2, at 9; *Five-Year Review*, *supra* note 2, at 5. There appears to be some discrepancy in the total acreage of the buffer zone. FCWA filed seven Deeds of Conveyance for properties along Upper Rock Lick Road that totaled 478.5 acres.

<sup>20</sup> See FCWA's Response to Commission Staff's First Set of Information Requests, Item 4 (filed Oct. 15, 2010).

meet its repayment obligations.”<sup>21</sup> FCWA proposed that the Commonwealth “purchase that portion of the lines which service the customers which . . . [FCWA was] losing.”<sup>22</sup>

After extended negotiations,<sup>23</sup> FCWA agreed to release its claims against the Commonwealth. The executed release provided that \$35,000 was paid to FCWA in consideration of its releasing all parties from any losses arising out of

the acquisition of property by or on behalf of the parties . . . the subsequent alleged loss of customers and/or revenue by the Fleming County Water Association, and the cost of installation and/or abandonment of piping, connections, cut-offs, and all other associated labor, equipment, and materials necessary to supply water to the area within a two mile radius of the state-owned property at the Maxey Flats Superfund Site.<sup>24</sup>

After receiving payment, FCWA reimbursed the nine customers whose water service had been discontinued. Each customer received his or her initial connection fee of \$320 and his or her membership fee of \$10. Roscoe Johnson was one of these customers. In addition to 49 acres of land within the buffer zone, Mr. Johnson owned 160 acres of land at the end of Upper Rock Lick Road and to the east of the buffer zone.

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<sup>21</sup> Internal Memorandum from Charles M. Williamson, Cabinet Attorney, to E. Douglas Stephan, Commissioner, Department of Law, and Russ Barnett, Cabinet Deputy Commissioner (Apr. 17, 1995).

<sup>22</sup> *Id.*

<sup>23</sup> See FCWA's Response to Commission Staff's First Set of Information Requests, Item 7 (filed Oct. 15, 2010).

<sup>24</sup> Release of the Fleming County Water Association (May 28, 1997) (filed in FCWA Data Response Item 7 (filed Oct. 15, 2010)).

In 1997 FCWA disconnected the 3-inch water main along Upper Rock Lick Road and Drip Springs Hollow Road.<sup>25</sup> The disconnection was made downstream of the point at which the line branches to form separate lines to serve Upper Rock Lick Road and Drip Springs Hollow Road.<sup>26</sup> FCWA also removed the unneeded nine meters that were set along these roads.

In December 2003, the Commonwealth filed a Declaration of Restrictions with the Fleming County Clerk's Office for each of the properties in the buffer zone. The ROD required these restrictions to be placed on the buffer zone properties. Under the provisions of the Declaration, any activity that could create a risk of migration of contaminants or diminish the structural integrity of protective measures in the area is prohibited. The Declaration "precludes residential and industrial uses." It further prohibits the Commonwealth from permitting any person to occupy the buffer zone properties without EPA's agreement.

Roscoe Johnson died on March 31, 2005. In his will, Mr. Johnson devised the 160-acre property at 1860 Upper Rock Lick Road to Charlotte E. McKee, Reva J. McKee, and S. Dale McKee, subject to a condition that the property not be conveyed within ten years of his death. On November 24, 2006, the McKees entered into an agreement with Wilmer and Pauline Conn to lease the parcel until ten years after Mr. Johnson's death and then to convey title of the property to the Conns. As part of this agreement, the Conns paid \$37,500 to the McKees.

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<sup>25</sup> VR: 02/03/2011; 15:38:25.

<sup>26</sup> Mr. Jett testified that the check valve that was located downstream of the meter that served the property of John and Eula Vise was removed and a blow-off valve was installed in its place. VR: 2/3/11; 15:30:00-15:30:45.

The Conns are constructing a house on the property at 1860 Upper Rock Lick Road. Mr. Conn testified that he believed that the property had water service when he entered the lease/purchase agreement and that FCWA's water main along Upper Rock Lick Road was still operational. After learning that the property lacked water service, he requested that FCWA re-establish water service through that water main. Mr. Conn attended several FCWA board meetings at which he inquired about receiving water service to the property through the decommissioned water main.

Initially, FCWA officials indicated a willingness to serve the property if appropriate state officials confirmed that the possibility of contamination did not exist.<sup>27</sup> Two months later, FCWA revised its position and requested bonded guarantees from the Commonwealth regarding the water main's safety and its potential effects on FCWA's system.<sup>28</sup> Mr. Conn then contacted the Kentucky Environmental and Public Protection Cabinet's Division of Waste Management, which advised him that it had no information of any contamination at the water main's location, but could not state with absolute certainty that any area of the state was uncontaminated. It further stated that the Division had "no opposition to the water line being re-established for this resident at this time, especially since it would warn against the use of well water on this property due to the groundwater contamination in the adjacent area."<sup>29</sup>

Mr. Conn also questioned the Commonwealth's Finance and Administration Cabinet about ownership of the decommissioned water main. In response to his

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<sup>27</sup> See FCWA Board Minutes of September 19, 2007 (filed Feb. 9, 2011).

<sup>28</sup> See FCWA Board Minutes of November 21, 2007 (filed Feb. 9, 2011).

<sup>29</sup> Letter of Fazi Sherkat, Manager, Superfund Branch, to Fleming County Water Association (Dec. 17, 2007). Another Superfund Branch Manager reaffirmed the Division's position. See Letter of Shawn A. Cecil, Manager, Superfund Branch, to Wilmer Conn (July 15, 2009).

questions, the Department of Facilities and Support Services advised that the Commonwealth did not own the water main and that no deed restrictions affected the water main.<sup>30</sup> FCWA disagrees with this position and maintains that these restrictions prevented any service to a customer through a water main that crosses any buffer zone properties.<sup>31</sup>

In discussions with FCWA officials in 2007, Mr. Conn questioned why FCWA operated a section of the water main that extended into the western-most buffer zone property.<sup>32</sup> He contended that, if the water utility could safely extend and operate the water main to that point, it could safely extend and operate the water main to serve his property. FCWA indicated that the water main's extension into the buffer zone property was merely an oversight. Because the end segment of that line did not serve any customers, FCWA made a second disconnection approximately 500 feet west of the intersection of Drip Springs Creek and Upper Rock Lick Road.<sup>33</sup>

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<sup>30</sup> See Letter of James F. Abbott, Commissioner, Department for Facilities and Support Services, to Fleming County Water Association (Aug. 27, 2007).

<sup>31</sup> The EPA takes a position similar to the Department of Facilities and Support Services. In its *Five-Year Review Report*, it stated:

Mr. Wilmer Conn, a resident outside the restricted area, has petitioned the local water and sewer authority to extend a water line to his residence. The water line will pass through the buffer zone around the restricted area. EPA does not believe that a potable water line under pressure passing through the buffer zone is a violation of any of the restrictions contemplated by the remedy.

*Five-Year Review*, *supra* note 2, at 33.

<sup>32</sup> John and Eula Vise previously owned this property. The record is unclear as to how far this main extends into the buffer zone. The record suggests that it extends no more than 500 feet into the buffer zone.

<sup>33</sup> Mr. Conn and Mr. Jett presented conflicting testimony regarding the length of the main section that was disconnected in 2007. Mr. Conn stated that the disconnected section was 1,230 feet. Mr. Jett asserted the length of the main was 400 feet.

Unwilling to extend service to the Conns' property along Upper Rock Lick Road, FCWA proposed to extend its water distribution main on Skaggs Lane to the southernmost point of the Conns' property. The proposed extension would be approximately 700 feet and would require an easement from a private landowner. One landowner has offered to sell to the Conns for \$22,000 approximately ten to twelve acres of land to locate the water main. Alternatively, he has offered to grant FCWA an easement to cross his land for \$15,000. FCWA would require the Conns to deposit the total cost of the excess footage over 50 feet of water main. The total cost would include easement acquisition costs.

The Conns opposed FCWA's proposal on two grounds. First, in the event of a service line break or other problem, it would be very difficult to shut off water service since the proposed location for the water meter would be atop Skaggs Ridge, which is approximately 250 feet higher than his proposed home. Second, because the service line will be located in rock, it is more likely to experience a break when it vibrates and comes into contact with the rock.<sup>34</sup> Given the steep terrain, such line breaks would be very difficult to repair.<sup>35</sup>

Unable to reach agreement with FCWA on the provision of water service to their proposed home, the Conns brought a formal complaint against the water utility.

#### PROCEDURE

On February 8, 2010, the Conns filed a formal complaint against FCWA with the Commission. In its answer, filed with the Commission on February 22, 2010, FCWA

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<sup>34</sup> VR: 02/03/2011; 11:45:45-11:46:59.

<sup>35</sup> Although not expressly stated as a reason for the Conns' opposition to the FCWA proposal, the total cost that the Conns would incur if the alternate route was used would be greater than if the abandoned water main provided the water service.

stated that the requested extension of service was unreasonable because of possible contamination from the MFDS site and offered to extend service through an alternative means.

Following discovery by Commission Staff, the Commission held a hearing in this matter on February 3, 2011. Presenting testimony at this hearing were: Wilmer Conn, Complainant; Scott Wilburn, Maxey Flats Project Director, Kentucky Department of Environmental Protection; J.E. Smith, President, FCWA; and Eugene Jett, Superintendent, FCWA. The record closed upon the parties' submission of responses to information requests made at the hearing. The parties have waived their right to submit written briefs.

#### LEGAL STANDARD

A water utility generally has a duty to make reasonable extensions of service.<sup>36</sup> KRS 278.030(2) requires all utilities to render "adequate, efficient and reasonable service." KRS 278.280(3)<sup>37</sup> permits the Commission to order reasonable extensions of service. Based upon these statutory authorities, Kentucky courts have recognized this duty to make service extensions.<sup>38</sup>

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<sup>36</sup> 64 Am. Jur. 2d *Public Utilities* § 36 (2010) (stating that a public utility has "a public duty to render service commensurate with its offer of providing a service system that will be reasonably adequate to meet the wants of the community or territory, not only at the time of the commencement of the service but likewise to keep pace with the growth of the community or territory served and gradually to extend its system as the reasonable wants of the community or territory may require").

<sup>37</sup> Any person or group of persons may come before the commission and by petition ask that any utility subject to its jurisdiction be compelled to make any reasonable extension. The commission shall hear and determine the reasonableness of the extension, and sustain or deny the petition in whole or in part.

<sup>38</sup> See, e.g., *City of Bardstown v. Louisville Gas & Elec. Co.*, 383 S.W.2d 918, 920 (Ky.1964) ("We conceive that the duty of a public utility under the general public utility statutes is to render adequate, efficient and reasonable service . . . within the scope or area of service provided for in its certificate of convenience and necessity . . . . It can be compelled to make any reasonable extension of its service facilities within its certificated scope or area of service.").

Pursuant to KRS 278.280(2),<sup>39</sup> the Commission has promulgated 807 KAR 5:066, Section 11, which addresses extensions of service by water utilities. It requires a water utility to make an extension of 50 feet or less to its existing distribution main without charge for a prospective customer who contracts for a least one year of service.<sup>40</sup> When a request for an extension of water main exceeds more than 50 feet per applicant, the water utility may require the total cost of the excessive footage over 50 feet per customer to be deposited with the utility by the applicant or the applicants, based on the average estimated cost per foot of the total extension.<sup>41</sup> Notwithstanding these general rules, the Commission retains the authority to require a utility to construct extensions greater than 50 feet when we find that such extension is reasonable and that an extension of 50 feet or less is unreasonable under the circumstances.<sup>42</sup>

Even though the Commission has “sought to define ‘reasonable extension of service’” since its creation,<sup>43</sup> our regulation focuses primarily on which party should be responsible for the costs of the extension. In 1935, the Commission promulgated rules requiring water distribution main extensions of 50 feet or less to be made at no cost to an applicant for service.<sup>44</sup> In 1959, it revised these regulations to provide for refunds for

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<sup>39</sup> The commission shall prescribe rules for the performance of any service or the furnishing of any commodity of the character furnished or supplied by the utility, and, on proper demand and tender of rates, the utility shall furnish the commodity or render the service within the time and upon the conditions provided in the rules.

<sup>40</sup> 807 KAR 5:066, Section 11(1).

<sup>41</sup> 807 KAR 5:066, Section 11(2).

<sup>42</sup> 807 KAR 5:066, Section 11(6).

<sup>43</sup> Case No. 2006-00118, *South Anderson Water Dist.* (Ky. PSC Aug. 16, 2007).

<sup>44</sup> Administrative Order No. 5, *Rules and Regulations for Government of Electric, Gas and Water Utilities* (Ky. PSC Apr. 1, 1935).

extensions made in excess of 50 feet and to make specific provision to allocate the risk for extensions made to real estate subdivision developments.<sup>45</sup> These regulations have remained virtually unchanged for the past 50 years.

The term “reasonable” addresses more than financial considerations. In Case No. 99-513,<sup>46</sup> for example, the Commission found unreasonable a request for extension of electric service that required an electric utility to place its facilities on inaccessible terrain, to incur significant costs to install necessary facilities, and to subject its employees to significant safety hazards when constructing, operating and maintaining those facilities. Notwithstanding that the requested route was a shorter distance from existing utility facilities than the utility-recommended route and was within a distance that would not require any contribution from the applicant, we found that the safety hazards rendered the proposed route unreasonable and that the longer route was the more appropriate and reasonable route.

Continuity of service must also be considered in determining the reasonableness of a proposed extension. In Case No. 96-188,<sup>47</sup> a prospective customer sought an order compelling a water utility to provide water service water to his property by making a 2-inch tap onto a 20-inch concrete water transmission main. The Commission found that, although the proposal was the least expensive alternative, it posed a significant risk to service continuity. Noting that the transmission main was not intended for use as a distribution main, that a tap would threaten the structural integrity of the main by increasing the risk of corrosion of the prestressed wiring and steel cylinder components

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<sup>45</sup> Administrative Case No. 102, *Revision of the Commission's Rules* (Ky. PSC Oct. 29, 1959).

<sup>46</sup> Case No. 99-513, *Taylor v. Clark RECC*, at 6 (Ky. PSC Oct. 15, 2001).

<sup>47</sup> Case No. 96-188, *Bryant v. Northern Kentucky Water Dist.*, (Ky. PSC Apr. 21, 1997).

of the main, and that any repairs to the proposed tap would require the water utility to shut off service temporarily to thousands of customers, the Commission found the proposed extension to be unreasonable.<sup>48</sup>

A proposed extension's effect on water quality is another consideration. In Case No. 2006-00163,<sup>49</sup> a prospective customer sought an 11-mile main extension to serve 43 prospective customers. Finding that limited usage along the proposed extension would result in unacceptably low levels of chlorine in the water and require frequent line flushings to ensure chlorine at acceptable levels, the Commission held that the proposed extension was not reasonable.

In summary, the Commission must consider the totality of circumstances surrounding the requested extension to determine its reasonableness. The scope of our review is not limited to the financial effects of the proposed extension on either the applicant or the water utility, but includes such factors as water quality, worker safety, and the maintenance of facilities after the extension is made.

### ANALYSIS

While the parties to this case have focused their attention on the potential for radioactive contamination if the abandoned water main is returned to service, the dispositive factor is the residual chlorine level in the water provided through the water main. Water utilities introduce chlorine into their system to combat potentially harmful microbial bacteria. Chlorine, however, dissipates over time. The greater the time period in which chlorine-treated water remains in a water main, the lower the level of chlorine in the water and the greater the risk of the presence of harmful bacteria. Many

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<sup>48</sup> *Id.* at 6-7.

<sup>49</sup> Case No. 2006-00163, *Bradley v. Bath County Water Dist.* (Ky. PSC June 1, 2007).

factors contribute to the chlorine dissipation rate, including the quality of the raw water supply, temperature, and type of pipe. FCWA's Superintendent testified that water in the system should "turn over" daily to prevent chlorine dissipation.<sup>50</sup>

The abandoned water main through which the Conns request water service is a 3-inch water distribution main that is at least 6,000 feet in length.<sup>51</sup> A 3-inch water main extending 6,000 feet contains 2,203 gallons of water.<sup>52</sup> Assuming that the Conns use water at the same rate as the state per capita average use,<sup>53</sup> which is 70 gallons per person per day,<sup>54</sup> it would take almost 16 days for water within the water main to turn over completely.

Such a condition is contrary to accepted water utility practice. As a general rule, water systems "should be designed to maximize turnover and to minimize residence

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<sup>50</sup> VR: 02/03/2011; 15:45:45-15:46:20.

<sup>51</sup> This distance is calculated using Staff Hearing Exhibit 1. Mr. Jett testified that the distance from the first valve that FCWA placed in 1997 to the meter that served Mr. Johnson is 8,500 feet. VR: 02/03/2011; 15:43:54. Staff Hearing Exhibit 1, however, indicates that the distance is significantly shorter. The record suggests that FCWA's disconnection in 1997 resulted in the decommissioning of 8,500 feet of water line along both Upper Rock Lick Road and Drip Springs Road. See Invoice of FCWA to Mark Weishear, Attorney (Jan. 15, 1997) (filed in FCWA's Response to Commission Staff's First Information Request, Item 8 (filed Oct. 15, 2010)); Letter from Jeffrey W. Pratt, Manager, Superfund Branch, to Gene Jett, Superintendent, FCWA (Oct. 23, 1995) (filed in FCWA's Response to Commission Staff's First Information Request, Item 8 (filed Oct. 15, 2010)).

<sup>52</sup> Volume of the water main = length X radius<sup>2</sup> X  $\pi$   
= 6,000 ft X (0.125 ft)<sup>2</sup> X 3.1416  
= 294.524 cf  
= 294.524 cf X 7.481gal/cf  
= 2,203 gal

<sup>53</sup> Mr. Conn testified at the hearing regarding his plans to host a bluegrass music festival on the property. Given the speculative nature of these plans, we have assumed only the Complainants will be consuming water when determining the total water consumption for the property.

<sup>54</sup> See Joan F. Kenny et al., Estimated Use of Water in the United States in 2005 (U.S. Geological Survey Circular 1344, 2009) at 20. The estimated daily per capita use in Kentucky where a public source of supply is involved is 70 gallons. As two persons will reside on the Conns' property, total daily use should be 140 gallons, or 4,200 gallons per month.

times while delivering acceptable pressures and flows.”<sup>55</sup> The Kentucky Division of Water generally requires that water storage tanks and water distribution mains that are connected to such tanks “have a minimum 100% turnover rate of once per 72 hours.”<sup>56</sup>

To provide water service to the Conns through the 3-inch water main along Upper Rock Lick Road and meet water quality standards, FCWA would have to flush the water main approximately seven times each month. We estimate the annual cost of this constant flushing to be approximately \$4,590.<sup>57</sup> This cost will not be directly recovered from the Conns, who will be charged only for the amount of water consumed, but must be recovered from all FCWA ratepayers through general service rates.

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<sup>55</sup> Great Lakes – Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers, *Recommended Standards for Water Works* (2007) at 8.0, available at <http://10statesstandards.com/waterstandards.html> (last visited May 27, 2011).

<sup>56</sup> 401 KAR 8:100, Section 8(1)(b); Kentucky Division of Water, “General Design Criteria for Surface and Ground Water Supplies,” (Apr. 1, 2010) at 8, available at <http://water.ky.gov/permitting/Documents/GeneralDesignCriteria.pdf>.

<sup>57</sup> To reach this amount, we assume that the water main must be flushed every four days, or approximately seven times per month. We further assume that when the main is flushed, approximately 1,783 gallons of water will be lost. This volume is determined by subtracting three days’ usage – 420 gallons (140 gallons per day x 3 days) – from the total volume of water that the water main section holds (2,203 gallons). We determined the cost of lost water to be \$2.059 per 1,000 gallons by dividing the sum of FCWA’s purchased water (\$593,692) and purchased power costs (\$13,775) in 2010 by the total gallons of water (294,977,000 gallons) that FCWA purchased in 2010. See *Annual Report of Fleming County Water Association to the Kentucky Public Service Commission for the Year Ended December 31, 2010* at 28-29. We calculated the total cost of lost water on an annual basis as follows: 1,783 gallons X \$2.059 per 1,000 gallons X 7 flushings per month X 12 months = \$308.

In addition to the cost of lost water, FCWA will incur increased labor and transportation expenses to perform the flushing. We assumed that each flushing, including travel time, would require two hours of labor. Using the most recent labor rates that FCWA has provided (\$18 per hour), we calculate total annual labor expense associated with the flushing as follows: 12 months X 7 flushings per month X 2 hours X \$18 per hour = \$3,024. Using the transportation rate that FCWA has provided for a trip to a customer’s location (\$15), we calculate transportation expense for the flushings as follows: \$15 per trip X 7 trips per month X 12 months = \$1,260. For FCWA’s labor and transportation rate, see Case No. 2009-00240, *Fleming County Water Association* (Ky. PSC filed June 25, 2009).

Total Cost = \$308 + \$3,024 + \$1,260 = \$4,592.

While an extension of service is not necessarily required to generate revenues equal to or in excess of the cost of service,<sup>58</sup> any extension that results in costs that are significantly greater than the revenues likely to be generated will not generally be deemed to be reasonable. Under the proposed extension of service, FCWA will incur annual costs of \$4,696<sup>59</sup> to generate annual revenues of \$378.<sup>60</sup> We find that, given little likelihood that additional customers will be served through the proposed extension, the disparity between revenue and expense is too great to render the extension reasonable.

### SUMMARY

Based upon the above, the Commission finds that the requested extension of service is not reasonable and that the Complaint should be denied. Our action does not relieve FCWA of its duty to extend service to the Conns' property. FCWA must still comply with the provisions of 807 KAR 5:066, Section 11. We encourage both parties to work toward a mutually agreeable resolution that will ensure water service to the property that complies with all state and federal water quality standards. We direct Commission Staff to assist the parties' efforts where appropriate.

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<sup>58</sup> See, e.g., 73B C.J.S. *Public Utilities* § 6 (2011).

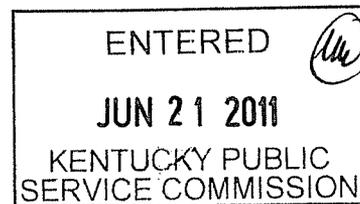
<sup>59</sup> In addition to the \$4,592 related to the frequent flushing of the water main, FCWA's annual cost to provide the Conns with water is \$104. We calculate this amount based upon an average monthly usage of 4,200 gallons and an actual cost of water of \$2.059 per 1,000 gallons.

<sup>60</sup> Assuming that the Conns' monthly usage is 4,200 gallons or 140 gallons per day and using FCWA's present rate schedule, the Conns' monthly bill is \$31.52.

IT IS THEREFORE ORDERED that:

1. The Complaint is denied.
2. Subject to the filing of a timely petition for rehearing pursuant to KRS 278.400, these proceedings are closed. The Executive Director shall place any future filings in the appropriate utility's general correspondence file or shall docket the filing as a new proceeding.

By the Commission



ATTEST:

*Stephanie Bell for Jeff Drown*  
Executive Director

Case No. 2010-00049

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